

# NOTES ON THE CHEESEMAN HERBARIUM

## Part 2. Exchange with European herbaria before 1900

JEANNE H. GOULDING

AUCKLAND INSTITUTE AND MUSEUM

*Abstract.* Early exchanges between T. F. Cheeseman and botanists in the British Isles, Switzerland, Italy, Austria, Hungary and Germany are traced through specimens in the Auckland Institute and Museum Herbarium (AK) and through letters to Cheeseman in the manuscript collection of the Auckland Institute and Museum Library.

### *History of exchange*

In 1877 T. F. Cheeseman, curator of the Auckland Institute and Museum from 1874 to 1923, wrote to European museums with the purpose of initiating an exchange of plant specimens between the Auckland Museum and European herbaria. He also advertised for exchange with British herbaria in *Journal of Botany* Vol. 8, May 1879 (p. 160), as follows:

"Mr T. T. [sic] Cheeseman, of the Museum, Auckland, New Zealand, wishes to exchange the plants of that country for British ones. He is prepared to send any number up to 600 of well-dried and accurately named Phanerogams and Ferns."

It is apparent that in the 1870s Cheeseman collected many duplicate specimens, "in all branches of natural history" (*Report of the Auckland Institute for 1877-78*, p. 10) with an eye to the advantages of overseas exchange in building up the Museum collections. He took pride in preparing first class plant specimens and was often complimented on this quality by recipients of his exchanges in other countries. In like manner most of the overseas plants sent in return were well presented though sometimes accompanied by meagre, hand-written labels not easy to decipher.

As with Cheeseman's dealings with American herbaria (Goulding 1974) the early European exchanges often came through the auspices of private collectors and botanists, but it was from the established institutional herbaria such as at British Museum, Kew and Geneva that Auckland Museum received the most valuable duplicates.

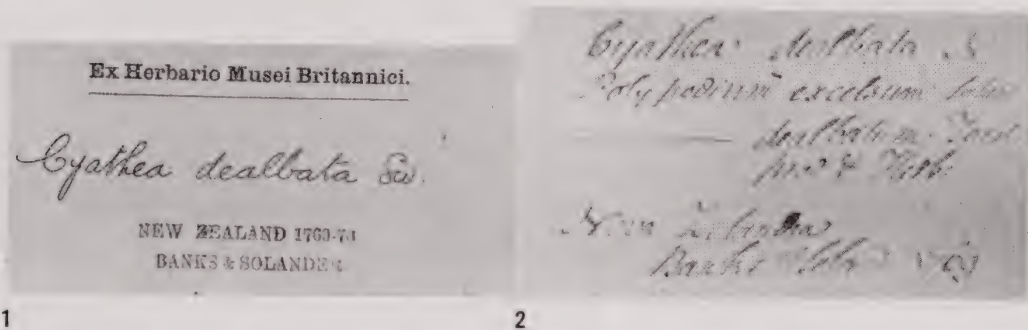
### BRITISH ISLES

#### *British Museum (Natural History)*

Although no definite exchange programme existed before 1900, the Auckland Institute and Museum Herbarium is indebted to the British Museum for one of the most important collections ever received. The specimens were from the Banks and Solander collections made during Captain Cook's first visit to New Zealand, in the "Endeavour", 1769-70. Duplicates from this first collection of New Zealand plants made by European botanists were obtained from the British Museum (Natural History) in 1895, by the New Zealand Government, who subsequently forwarded a set to

Cheeseman in 1900. At the same time Cheeseman also received "182 prints from engraved plates of New Zealand plants obtained during Cook's First Voyage." (New Zealand Department of Education, Wellington, to Cheeseman, 4 April 1900). Both the Banks and Solander specimens and the engravings were made available to Cheeseman for the preparation of his *Manual of the New Zealand Flora* (Cheeseman 1906), and remain invaluable assets in the present-day Herbarium. The engravings are of special interest because, unlike the Banks and Solander plates of Australian plants, they have never been published as a whole. Individual plates have been reproduced as illustrations, for example, in a Handbook of the Auckland War Memorial Museum (Brooker & Cooper 1962), and a group of eight plates in the handsome volume of botanical engravings, *Captain Cook's Florilegium* (Blunt & Stearn 1973).

The specimens collected by Sir Joseph Banks and Dr Solander, of historic significance to New Zealand botanists in particular, are mostly well preserved and many of the 200-year-old specimens, especially the ferns, look no older than those collected by Cheeseman a hundred years later. Most of the old grey labels with the Banks and Solander plants are printed (Fig. 1) but occasionally there is also a hand-written one (Fig. 2) — not in the hand of Banks or Solander but perhaps of Robert Brown, who had charge of the original Banksian herbarium and later became first Keeper of the British Museum Herbarium.



Figs. 1, 2. Herbarium labels. 1. Printed label of Banks and Solander collection ex British Museum Herbarium (11.8 × 6.2 cm, grey). 2. Hand-written label (9.7 × 6 cm) on same collection as Fig. 1.

Banks and Solander specimens are still being included in duplicate Australasian collections sent to Auckland Museum Herbarium by the British Museum (Natural History) — some in a package received as recently as January 1974. There were no Cheeseman duplicates recorded as at the British Museum Herbarium up to 1902 (Murray 1904), and it appears that all his earliest collections went to Kew for determination.

#### *Royal Botanic Gardens, Kew*

At the age of twenty-one, Cheeseman was corresponding with, and sending specimens for identification to, the Director of the Royal Botanic Gardens, at Kew, J. D. Hooker. Hooker's *Flora Novae-Zelandiae* was the first full account of the New Zealand flora (Hooker 1852-1855). Of this work Cheeseman later wrote (Cheeseman 1925 p. xxvii):



"The publication of this important work, in every way worthy of the reputation of its distinguished author, marked a new era in the history of the botany of New Zealand. For the first time the student was provided with an account of the flora characterized by aptness of description and accuracy of detail, and prepared by a botanist who had not only studied and collected a large proportion of the species in their native habitats, but whose position gave him ample opportunities of examining the material upon which the publications of his predecessors were founded."

The earliest letter from Hooker to Cheeseman, in the Auckland Institute and Museum Library's manuscript collection, is dated October 22 1867 (Fig. 3). After Cheeseman became Curator of the Auckland Museum in 1874, a great number of New Zealand plant specimens, some of them new species, were forwarded to Kew for (the then) Sir Joseph Hooker's appraisal. "We shall look forward impatiently to your coming novelties", wrote Hooker to Cheeseman in May 1881, and in June the same year — "I lose no time in sending you a note on the charming and beautifully dried specimens which you have sent me."

Actual exchange between Kew and Auckland began in 1882. "We are putting up a collection of Herbarium specimens for you, Ferns and Tasmanian plants which I hope will prove acceptable." (Hooker to Cheeseman, 5 September 1882). This was in response to Cheeseman's request to European herbaria for exchange specimens. Many Tasmanian collections from "Herb. Spicer", now in the Auckland Institute and Museum Herbarium, have "Ex Kew" in Cheeseman's handwriting, in pencil (Fig. 4), and on others he wrote "Ex Kew — Ex Herb. R.Br." (Fig. 5). It is possible that the small labels on these latter specimens are in Robert Brown's hand. None of this "Ex Kew" material has printed Kew Labels.

The fact that the herbarium at Kew was not founded until 1853 accounts for Hooker's own New Zealand collections in the Cheeseman Herbarium being labelled "Ex Herbario Musei Britannici". The British Museum Herbarium was established in 1827 with the acquisition of the Banksian Herbarium, and Hooker, between 1845 and 1854, presented "1,404 species, being all the phaenogamous and great part of the cryptogamous plants of New Zealand collected during the voyage of the *Erebus* and *Terror*, 1839-43" (Murray, 1904).

After Hooker retired from Kew in 1885 he continued to write to Cheeseman from "The Camp, Sunningdale". At Kew, W. Botting Hemsley took over the correspondence with Auckland Museum and was in constant communication for many years. He assisted Cheeseman in the preparation of the *Illustrations of the New Zealand Flora* published in 1914 (Cheeseman 1914). The plates for this volume were drawn by Miss Matilda Smith at Kew, from dried specimens specially sent by Cheeseman.

#### *Arthur Bennett* (1844 - 1929)

In the Cheeseman Herbarium, Arthur Bennett's name appears on a variety of labels on hundreds of British and European plants. Even more numerous than the printed labels "Ex Arthur Bennett, F.L.S. England" or "Collected by A. Bennett, Croydon, Surrey" (Fig. 6), are the hand-written additions of "Com. Arth. Bennett" and "From A. Bennett, England", on labels of other collectors (Figs. 7-9). Bennett was a corresponding member of the "British Exchange Club" and he also carried out a personal exchange programme with many botanists and institutions throughout the world.

New York 22/10/67

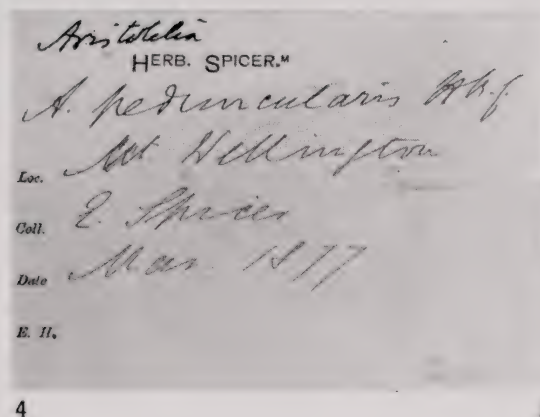
My dear Sir

I received your letter  
of Aug 9<sup>th</sup>. This day, & have  
the pleasure of informing you  
that the little bird you send  
is quite new, & that you are  
right in referring it to the  
Genus *Coryphantha*, of which  
it is a remarkable little  
species.

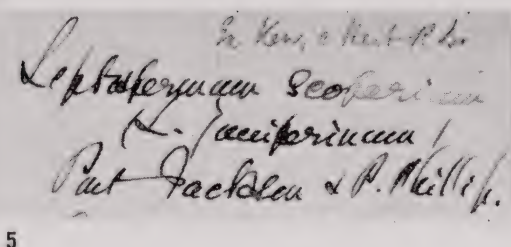
Many thanks for your  
information regarding *Junco*  
*holochlorus*, which I doubt  
not is common in New Zealand.

Fig. 3. Portion of letter from J. D. Hooker, 22 October 1867.

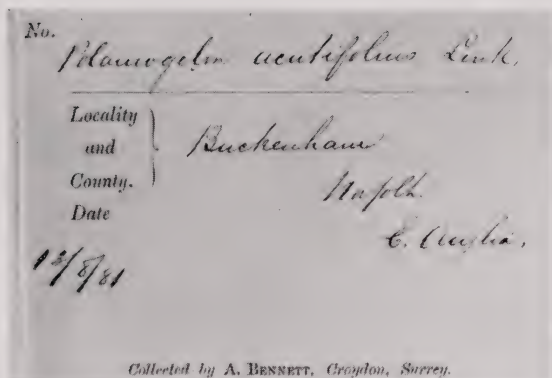




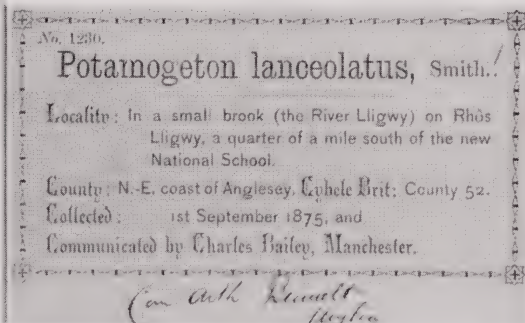
4



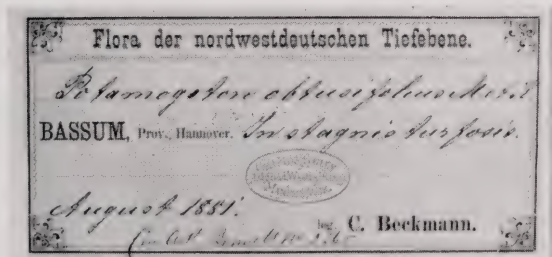
5



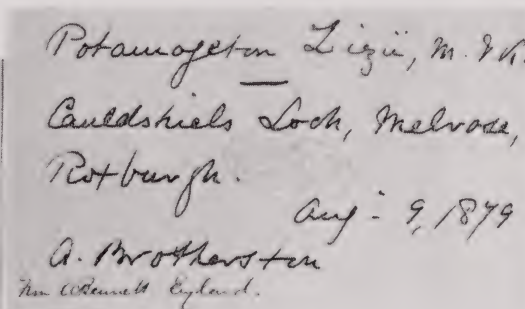
6



7



8



9

Figs. 4-9. Herbarium labels. 4. Label ex Kew, ex Herb. Spicer (12.5 × 9 cm) — collector E. Spicer, 1877. 5. Label ex Kew, ex R. Brown (8.5 × 3.2 cm). 6. Label of A. Bennett, 13 August 1881 (12 × 8 cm). 7. Label of Charles Bailey, 1 September 1875, ex Bennett (11 × 6.8 cm). 8. Label of C. Beckmann, August 1881, ex Bennett (14.3 × 7.5 cm). 9. Label of A. Brotherston, 9 August 1879 (10 × 6.4 cm).

Born and educated at Croydon, England, Arthur Bennett worked there for his father, a builder and house decorator, and eventually carried on the business himself. He was regarded as one of the great amateur botanists of his time and contributed

many papers to *Journal of Botany* from 1878 until 1929. Many new plant records for Scotland and the Eastern Counties of England were reported by him. Aquatics were his specialty, particularly *Potamogeton*, for which he was claimed the "best British expert" of his day (Salmon 1929). In 1883, a New Zealand *Potamogeton* sent to him by Cheeseman (collected at St. John's Lake, Auckland, December 1881) was named by Bennett in Cheeseman's honour, *P. cheesemanii* A. Benn. (Bennett 1883, p. 66).

Bennett first wrote to Cheeseman from Croydon in October 1880, "In *Journal of Botany* (English) you mention your wish to exchange plants with British Botanists — am I too late?" He went on to offer in exchange "a set of our British *Potamogetons* & *Characeae* so far as obtainable . . ." and mentioned other water plants he was partly interested in (Fig. 10).

I am sure one who does I  
 shall be very glad to send you  
 a set of our British *Potamogetons*  
 & *Characeae* so far as obtainable (some  
 of the latter have only been gathered  
 once or twice.)  
 I have lately added  
*Chara stelligera*, Baines to our  
 flora -  
 The other genera I am partly  
 interested in are *Ostiauche*  
<sup>or</sup> *Junci*, *Cyperaceae*, *Callitriche* &  
*Isetes* -  
 I shall be very pleased  
 to hear from you -  
 Yours truly  
 A. Bennett

Fig. 10. Portion of letter from Arthur Bennett, 18 October 1880.



It was not until the end of 1882 and after much correspondence regarding the despatch of specimens, that Bennett received his first box of New Zealand plants — "About half-an-hour ago your Box came safely to hand & I hasten to acknowledge its arrival at *once*, as my former letters will doubtless make you think it would not turn up & really I began to think it was lost." (Bennett to Cheeseman, 5 December 1882). The first box for Cheeseman did not leave until February 1883 and contained "a nearly complete set of British Cyperaceae . . . several Junci — a nearly complete set of British Potamogetons & Characeae." (Bennett to Cheeseman, 26 February 1883). Carices numbered 55 in the incomplete list of specimens which preceded the box of plants which was shipped from England by Owen and Graham, who handled all the European shipping arrangements for Cheeseman. Owen and Graham were well-known as merchants and importers, as well as shipping agents, in Auckland in the 1880s.

European collectors whose specimens are included in the ex Bennett material now in the Auckland Institute and Museum Herbarium are: C. G. Baenitz, C. Bailey (Fig. 7), C. Beckmann (Fig. 8), W. E. Beckwith, W. H. Beeby, A. Brotherston (Fig. 9), J. Bubela, J. Cunnack, G. C. Druce, A. Fryer, F. J. Hanbury, H. C. Haussknecht, J. Lange, L'abbé Letendre, E. F. Linton, Ch. Magnier, H. T. Mennell, H. A. Moller, R. P. Murray, G. Nicholson, O. Nordstedt, A. Orbony, H. du Pavillon, R. Renton, G. Rigo, H. Searle, E. Straker, A. Sturrock, G. Tiselius, R. F. Towndrow, R. F. C. von Uechtritz, A. R. Waller, C. Waterfall, G. Webster, J. Whitehead, W. Wilson, A. P. Winslow, J. Zimmermann. Bennett also sent Cheeseman duplicates from North American botanists (Goulding 1974).

*John Hutton Balfour* (1808-1884)

There are many British plant specimens in the Auckland Institute and Museum Herbarium which were sent to Cheeseman by Professor Balfour from the Edinburgh Herbarium in 1879 (Fig. 11).

EX HERBARIO J. H. BALFOUR, M.D.

Beta maritima, *Linn.*  
Near Galway, Ireland.

Coll. Aug. 6, 1838.

SOCIETAS BOTANICA EDINENSIS.  
*Beta maritima*  
Hab. *de Capice*  
Co. *Argyll*  
Comm. *J. H. Balfour, M.D. 1841* Coll. *Aug 1840*  
(Edinburgh)

11

12

Figs. 11, 12. Herbarium labels. 11. Label of J. H. Balfour, 6 August 1838 (7 × 3.5 cm).  
12. Label of Societas Botanica Edinensis, August 1840 (8 × 3.5 cm).

After graduating in medicine at Edinburgh University and after further studies in Paris, J. H. Balfour took up a medical practice in Edinburgh in 1834. An interest in Botany begun in 1825 led to his establishment of the Botanical Society of Edinburgh in 1836 (Fig. 12). "Plants gradually drew Balfour away from patients and in 1840 he carried the divorce so far as to establish himself as a teacher of Botany in the Extramural Medical School in Edinburgh . . ." (Balfour 1913). In 1842 he became Professor of Botany at Glasgow University, succeeding W. J. Hooker, who moved to Kew, but by 1845 Balfour was back in Edinburgh. He was appointed "Professor of Medicine and

Botany and Keeper of the Royal Botanic Garden", at Edinburgh University, for which position J. D. Hooker had also been a candidate. Professor Balfour attained distinction as a teacher of botany, extending field-work and establishing laboratory classes at the University; also, under his administration the Botanic Garden trebled its size (Balfour 1913).

26 April 1879

Dear Sir

I have sat G.  
 the flora of the island of  
 comprising a series of  
 dried specimens of  
 the flora of Great Britain  
 & I shall be glad to get  
 New Zealand plants in  
 exchange. I trust that  
 the plants which I have  
 sent will be acceptable.

Fig. 13. Portion of letter from J. H. Balfour, 26 April 1879.



Just before his retirement from Edinburgh University, in 1879, Professor Balfour wrote to Cheeseman in answer to inquiries about exchange. "I have no doubt that the Herbarium in the Botanic Garden could present you with the British and European plants you want." (Balfour to Cheeseman, 15 April 1879). Again, on 26 April 1879 he wrote, "I have sent by the Globe Parcel Delivery Company a series of our specimens illustrating the Flora of Great Britain & I shall be glad to get New Zealand plants in exchange" (Fig. 13).

It is recorded (Hedge & Lamond 1970, p. 68) that Edinburgh Herbarium has a large collection of Cheeseman specimens, but Auckland Museum has no record of how many were sent or how many specimens were received from Balfour. The following collectors were represented in the ex Balfour material sent to Auckland: W. Brand, Mr Culross, W. Gourlie jun., W. S. Hore, J. Knapp, Dr Macnab, Thos. Moore, A. G. More, W. Pamplin, Rev. C. E. Parker, R. C. A. Prior, T. B. Salter and H. C. Watson.

*Alexander Craig-Christie* (1843-1914)

Mr Alexander Craig-Christie, of 36 Findhorn Place, Edinburgh, was one of those who answered Cheeseman's request for exchange in 1879. Writing to Cheeseman on 2 May that year he said, "I see from the Journal of Botany for this month, that you desire to exchange New Zealand plants for British ones. I shall be glad to send you any number up to 600 in exchange for an equal number. As I am rather particular in drying my plants, I shall expect plants to be well-dried, to be *wild* specimens, to have the exact *habitat* and *date* of collection and if possible to have the correct name." (Fig. 14). These instructions were hardly necessary for Cheeseman. In September 1879 Craig-Christie wrote saying he was sending a set of 500 specimens through the London agents Messrs Owen and Graham (Fig. 15).

May 2<sup>nd</sup> 1879

Dear Sir

I see from the Journal of Botany for this month, that you desire to exchange New Zealand plants for British ones. I shall be glad to send you any number up to 600 in exchange for an equal number. As I am rather particular in drying my plants, I shall expect plants to be well-dried, to be *wild* specimens, to have the exact *habitat*, and *date* of collection, and if possible to have the correct name.

If you have any particular desiderata make a note of them, and I shall be very happy to make them up. I am Sir

Yours Obedt<sup>ly</sup> & Dev<sup>ot</sup>

A. Craig-Christie

J. T. Cheeseman Esq }  
 Museum }  
 Auckland }

Fig. 14. Letter from Alexander Craig-Christie, 2 May 1879.

Collections made by Colonel Henry Halero Johnston (1856-1939) were included in material sent by Craig-Christie (Fig. 16). Colonel Johnston came from the Orkney Islands and was noted for his survey of the flora there as well as for collections made in India and Pakistan. Some of his Orkney plants came to Auckland. Cheeseman specimens are to be found in the H. H. Johnston material in Edinburgh Herbarium (Hedge & Lamond 1970) so perhaps a mutual exchange was also made or did Craig-Christie pass on the New Zealand plants to Johnston? It is likely that they were both members of "Societas Botanica Edinensis" near the turn of the century.

EX HERB. A. CRAIG-CHRISTIE.  
*Solidago Virga-aurea* L.  
*3 angustifolia.*  
 Glen Blay Athol  
 Sep 19<sup>th</sup> 1879

15

*Stellaria virginica* Murr.  
 Heath.  
 Ringodale, Linton, Orkney.  
 16<sup>th</sup> Sept. 1880.  
 Henry Halero Johnston  
 H. Johnston

16

Figs. 15, 16. Herbarium labels. 15. Label of A. Craig-Christie, 19 September 1879 (9 × 5.5 cm). 16. Label of Henry Halero Johnston, 16 September 1880 (10 × 6.2 cm).

British collections, pre 1900, in the Cheeseman Herbarium not labelled ex Bennett, ex Balfour or ex Craig-Christie (although more than likely from one of these sources) came from the following collectors: C. Bicknell, T. R. A. Briggs, W. Curnow, G. Dickie, J. Fraser, W. Gardiner, R. K. Greville (probably ex Balfour), J. E. Griffith, H. & J. Groves, J. S. Henslow, W. M. Hind, T. Kirk (specimens from Warwickshire, 1854, before he emigrated to New Zealand), R. M. Lingwood (ex Soc. Bot. Edinensis), M. T. Masters (ex Groves), T. Rogers, R. A. Rolfe, J. Saunders, R. J. Shuttleworth and W. C. Trevelyan. No correspondence has been found between any of these collectors and Cheeseman.

#### SWITZERLAND

*Joh. Müller* (1828-1896)

Duplicates from the world-wide herbarium at Geneva came to the Cheeseman Herbarium through Dr J. Müller, Director of the Botanic Garden and Herbarium Delessert in 1877. Letters to Cheeseman were signed "Prof. Dr J. Müller (Müll. Arg.)" (Fig. 17). "Müll. Arg." is the abbreviation for J. Müller of Aargau (Tutin et al. 1964, p. 392) and as author of a section of *Euphorbiaceae* in De Candolle's *Prodromus* his title was "Joh. Müller argoviensi".

Professor Müller first wrote to Cheeseman in 1877 concerning the exchange of botanical specimens. Cheeseman's wish for an exchange of Swiss plants had been brought to Müller's notice by M. Henri de Saussure of the Musée d'Histoire Naturelle Genève, who had begun an exchange of birds and insects with Cheeseman at the Auckland Museum.



The Lichens-collection for me could be sent in the box for the Herbarium Delessert, and I should send you my Lichens in the box that the Hb. Delep. will have to send you.

Be so kind, I pray, to tell me, if I may expect Lichens and in what a manner.

Respectfully yours

Prof. D. J. Müller  
(Müll. Arg.)

Director of the Bot. Garden, author of  
the *Euphorb. in DC. Prodr.* etc.

Duplicates of special New Zealand lichens would  
be very agreeable.

Fig. 17. Portion of letter from J. Müller, 28 January 1877.

At the Conservatoire et Jardin Botaniques, Genève, Müller was in charge of the Herbarium Delessert which, when presented to the city of Geneva in 1869 "became the basis of the collections of the *Conservatoire botanique*. Here they received excellent care; and Genève, with the *Conservatoire botanique*, the Candollean and the Boissier herbaria, became one of the most important centers of plant taxonomy of the world" (Stafleu 1970, p. 934).

Benjamin Delessert (1773-1847), French philanthropist and amateur botanist, had one of the richest private herbaria and botanical libraries of his time (Daniels & Stafleu 1974, p. 540). His herbarium of world-wide collections made by professional botanists was always available for taxonomic research, first in Paris and later when presented to Geneva. New Zealand is represented in the original Delessert herbarium by a collection of plants made by Allan Cunningham in 1825-26 and described by Antoine Lasegue (1845, p. 286) as "une belle collection de plantes cryptogames."

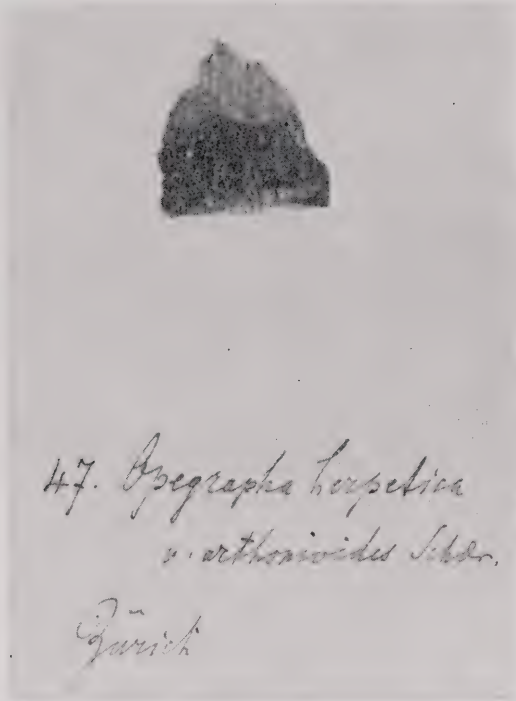
In August 1878, Müller received his first parcel of New Zealand plants from Cheeseman and had, ready for despatch, his "first series of circ. 530 European, particularly Swiss plants, and a first series of circ. 200 of my Lichens." (Müller to Cheeseman, 19 August 1878). Again, in 1882, Müller wrote that he was sending a box containing a good 1000 species of Phanerogams and 360 lichens. "The phanerogamical plants are sent from the Herbarium Delessert, the Lichens from myself personally." (Müller to Cheeseman, 22 July 1882). Apparently lichens were Müller's special interest at that time and he offered to return named specimens to Cheeseman of any unidentified New Zealand lichens sent.

The lichens sent to Auckland from Geneva corresponded "to the 2nd series of Dr Hepp's Exsiccata of European Lichens" (Müller to Cheeseman, 22 July 1882) and the specimens, now incorporated in the Auckland Institute and Museum Herbarium, were "fixed on the labels, so that not any confusion or mixture can bring doubts on the names". (Müller to Cheeseman, 19 August 1878). The "labels" are pieces of paper (plain on one side and perhaps Dr Hepp's list of Exsiccata on the reverse) cut to *ca.* 11 × 7.5 cm, with a number, name of specimen and locality, such as "Zurich", hand-written below the well-fixed lichen (Fig. 18). It is disappointing to find no reference to date of collecting and rarely a collector's name. The phanerogams as a rule are better labelled than the lichens, thanks in part to notes in Cheeseman's hand — e.g. "Ex Müller, Geneva" or more simply, just "Ex Müller".

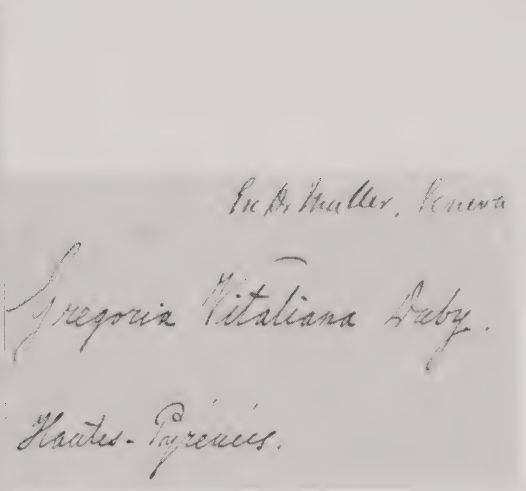
Müller's first concern was that the specimens he sent to Auckland were correctly named. "It is trew that the specimens are not allways fine-ones and contain not very often in the same time flowers and fruits, nor are they allways richely given, but they are allways in an useful state and are correctly named, which is the best for your Museum." (Müller to Cheeseman, 19 August 1878). At the same time it would have been of much benefit to the Cheeseman Herbarium had Müller included dates of collections and collectors' names on all the labels. The phanerogamic labels were slips of plain paper varying in size from approximately 8 × 3.5 cm to 11 × 6 cm and very often in Müller's handwriting (Fig. 19).

The many European specimens with printed labels: "Reliquiae Herb. Schleicher . . . communicavit Herb. Boissier 1898" (Fig. 20), must have come from Geneva, in the first place, but were certainly not sent to Cheeseman by Müller, who died in 1896. Perhaps they were sent by M. Eugene Aubrany, whose letter to Cheeseman dated 21 March 1899 was headed "Herbarium Boissier Chambésy près Genève", although he was only writing about an exchange of publications with Cheeseman — also asked for his portrait "de pouvoir placer votre photographie dans notre Galerie de botanistes". No other letters from Swiss botanists, before 1900, were found in the manuscript material in the Auckland Institute and Museum Library.

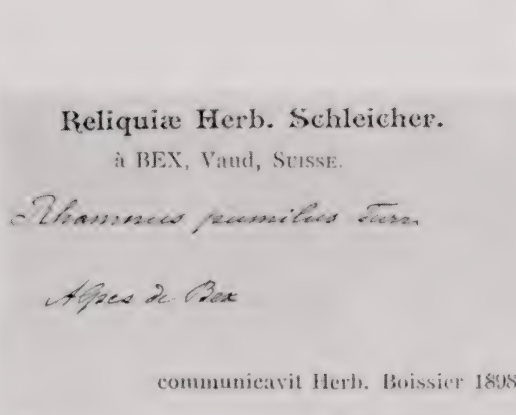




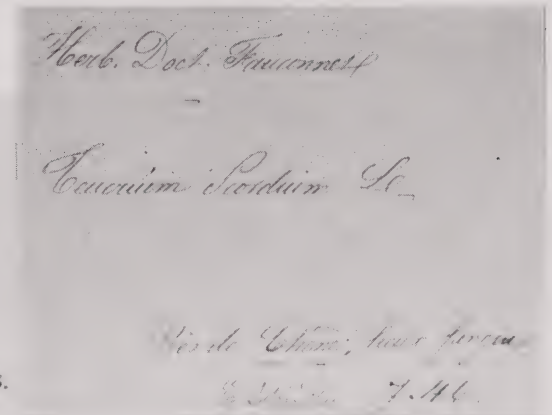
18



19



20



21

Figs. 18-21. Herbarium labels. 18. Label and lichen specimen from J. Müller (11 × 7.5 cm). 19. Label from J. Müller (8.5 × 5.5 cm). 20. Label from Herb. Boissier, 1898 (11.5 × 6.2 cm). 21. Label from Herb. Dr Fauconnet, ex Müller (9.5 × 7 cm).

According to Müller he despatched almost 2,000 specimens to Auckland Museum. These included collections made by H. Bordère, E. Burnat, C. I. Fauconnet (Fig. 21), F. Fillion, F. Graf, A. Moreau, Munch, H. A. Romieux, Schneider, and S. Sommer, as well as his own.

## ITALY

*Emile Levier* (1839-1911)

The Cheeseman Herbarium received several hundreds of specimens "ex Herb. Levier" all well labelled and well documented. The printed labels are often headed "E. Levier — Plantae Italicae" or "E Flora italica" followed by various localities, e.g. "Plantae Neapolitanae", "Plantae Venetae", "Plantes des environs de Bormio" (Fig. 22), "Iter Corsicum; 1880", "Iter Ispanicum 1879", "Herbarium etruscum", "ex Etruria (Toscana)" and "ex Agro Florentino".

It is recorded that Dr Emile Levier was a "physician and botanist in Florence" (Clokie 1964) and that his original herbarium is at "Herbarium Universitatis Florentinae, Firenze" and includes collections from T. F. Cheeseman (Chaudri et al. 1972, p. 437).

Exchange with Levier began after Cheeseman's correspondence, in 1877, with H. H. Giglioli of the Natural History Museum in Florence. Giglioli sought zoological specimens from the Auckland Museum — New Zealand bats, birds, reptiles and fish. He was also hoping to receive "ethnographical specimens relating to the Maori and Polynesian races . . ." (Giglioli to Cheeseman, 23 November 1877). In this letter he also wrote that his colleague in charge of the Botanic department, Professor Arcangeli, "and a botanic friend of mine Dr Levier, are setting aside for you a set of Italian Phanerogams and Cryptogams in exchange for New Zealand plants; the latter gentleman desires particularly Mosses."

It was through Dr Levier that Cheeseman received identifications of his mosses from A. Geheeb of Berlin. In his letter of 1 February 1882 Levier lists 100 "Musci Aucklandici" determined by A. Geheeb. In turn, Geheeb referred some of the mosses to C. Müller (not J. Müller of Geneva) who described several as new species — one as "*Bryum Cheesemanii*".

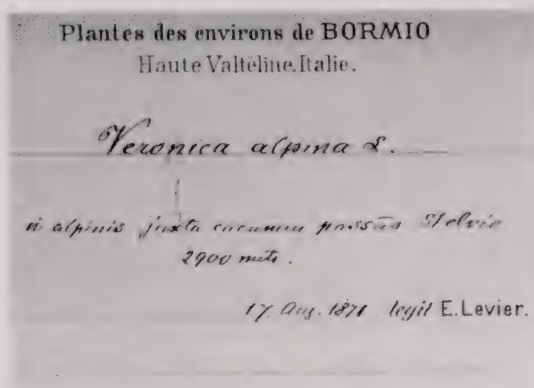
New Zealand liverworts were also sent by Cheeseman to Florence and after receiving his first batch in a parcel of specimens including "66 phanerogams, 14 ferns", Levier wrote, 18 October 1895:

"What delighted me, was to find also a set of splendid and splendidly prepared *Hepaticae*, and I thank you sincerely for having so generously answered my old desire . . .

I am very grateful for your diligent labour of preparation and for having isolated the different species. But I would also beg you to send me, for the future, *rough materials* and *mixtures*, as mosses and liver-worts grow in their natural stations, and, if possible, dried without pression. Such mixtures often contain the rarest species and unexpected novelties . . . Doing so, you would spare time, labour and paper, and procure me the high pleasure of an exploration amongst your cryptogamical treasures, brought back to life with some water in their natural association and with their genuine colour and odour."

Levier often remarked on the excellence of Cheeseman's specimens (Fig. 23), but more than once he took him to task over the lack of labels with *Hepaticae* (Levier to Cheeseman, 29 September 1896):





22

or fructifications of *Trichocolea*, *Schistoclella*  
(*gottschea*) etc. But all your collections are  
very carefully prepared, the Phanerogamae  
and Ferns also, and Prof. Giglioli praises  
not less your zoological specimens.

Now I beg your pardon for my bad  
English, drawn out in part from my dictionary.  
We had a very bad and rainy summer at the  
baths of Bormio; notwithstanding I had very  
much to do and could not undertake the  
excursions.

Believe me, Dear Sir,

Yours very faithfully

E. Levier

23

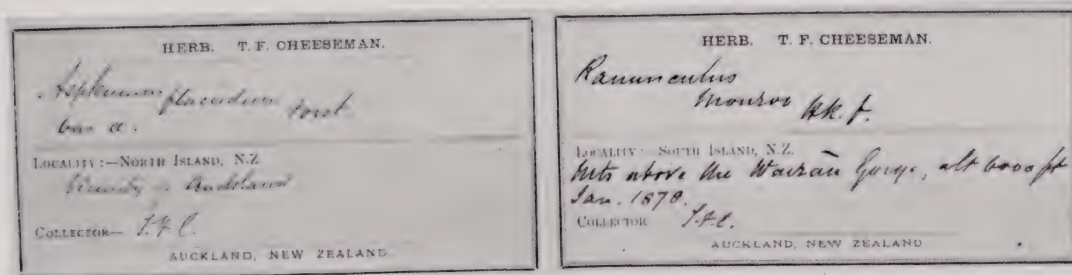
Figs. 22, 23. Herbarium label and portion of letter. 22. Label from E. Levier, 17 August 1871 (9.8 × 7 cm). 23. Portion of letter from E. Levier, 29 September 1896.

"As no labels accompanied your collection, I noted everywhere: *dist. of Auckland, 1895*. Was it right [sic]? If not, please give me those localities and collecting time you remember."

Again, in February 1899, Levier wrote:

"Professor Victor Schiffner, one of our first younger Hepaticologists, writes me in regard to your *Treubia* . . . and desires to know the *exact locality* where you found it. At the same occasion, I hope you will have the kindness to give me some particulars on the localities of your other Hepaticae, sent in 1895, and of which I returned to you small portions with Hr Stephani's determinations. I labelled them all with the simple indication: *Auckland, 1895*. Is it right?"

In this last letter Levier remarked that he had been somewhat disappointed by Cheeseman's silence and as this seems to be the end of the correspondence it is unlikely that Levier ever received the data he sought for the liverworts. The inadequacy of "District" or "Vicinity of Auckland" (Fig. 24) sometimes seen on Cheeseman labels has proved a stumbling block not only to Dr Levier but also to some New Zealand botanists. As a rule, however, the old Cheeseman Herbarium labels are well documented. (Fig. 25).



24

25

Figs. 24, 25. Herbarium labels. 24. Label from T. F. Cheeseman (13 × 7.5 cm). 25. Label from T. F. Cheeseman, January 1878 (13 × 7.5 cm).

After forwarding the bryophytes and hepatics to Adalbert Geheeb, Carl Müller and Franz Stephani for determination, Levier returned named portions of the New Zealand specimens to Cheeseman. Along with the letters (15 in all) a few lists of mosses and liverworts were found written in Levier's neat hand — also a faded old photograph of "La famille Levier sur le sommet du Piz Umbrail (été 1892)". Emilio, with bushy beard, stands against a rock cairn. Madame Levier, "très fatiguée d'avoir grimpé a 3100 m (10,000')", reclines at his feet and one of his sons stands beside a camera on a tripod. Another son is credited with the photograph.

In the Cheeseman Herbarium there are specimens from joint collections made by Levier and H. Groves in Italy, 1874; from an expedition to Spain by Boissier, Leresche and Levier, 1879, and from Levier and Sommier, "In Promentoria Argentario", 1886. Other collectors represented in the ex Levier material include: V. Borbás, H. Bordère, R. Fritze, H. Gander, G. Leimbach, C. I. F. Major, H. Papou, E. Rostan, W. Schultze, S. Sommier, J. A. Tauscher, and M. Wetschky.



Direction d. botanischen Gartens u. botanischen Museums d. k. k. Universität  
WIEN, III. RENNWEG 14.

25/10 99

Dear Sir!

A long time ago you have sent me kindly a collection of *Euphrasia* New Zealand species. Please excuse, that I did not answer quickly on this sending. It happened my appointment to professor at the Vienna university and to Director at the Vienna botanic Garden and the settling in the other place did not allow me to work. I thank you cordially for your sending and send at the same also a bit of my determinations. N<sup>o</sup> 14 and

Fig. 26. Portion of letter from R. Wettstein, 25 October 1899.

## AUSTRIA

*Richard von Wettstein* (1863-1931)

Many overseas specimens in the Cheeseman Herbarium are labelled "Flora Exsiccata Austro-Hungarica" and once again an old letter to Mr Cheeseman can solve the question as to the origin of an early exchange. A letter from Professor R. von Wettstein, written in 1899 (Fig. 26), explains how an exchange with Vienna developed after Cheeseman had sent a collection of *Euphrasia* to Wettstein, an authority on this genus. Subsequently Wettstein named *Euphrasia zelandica* and *E. cheesemani*; the latter, "expressing my thankfulness" (Wettstein to Cheeseman, 25 October 1899). Cheeseman in turn, in his *Manual of the New Zealand Flora*, acknowledged Wettstein's help in respect to the genus *Euphrasia*: "I have to express my indebtedness to Dr R. von Wettstein's elaborate monograph for much information respecting the New Zealand forms, all of which are endemic." (Cheeseman 1925, p. 838).

Dr von Wettstein wrote, in 1899, that he was sending "some Centuries in a box" of Flora Exsiccata Austro-Hungarica put out by "the Botanic Museum of the Vienna University" and that he also intended to send "the future Centuries of this Exsiccata". It is not known how many hundreds of these specimens were sent to Cheeseman, or how much he sent in return but it is likely that Exsiccata from the Botanisches Institut und Botanischer Garten der Universität Wien continued to be sent to Auckland Museum long after 1900.

The clearly printed Flora Exsiccata Austro-Hungarica labels have general localities but no collecting dates (Fig. 27). The following collectors are some of those whose names, printed in bold type, appear on the labels in the Cheeseman Herbarium: Borbas, Bornmüller, Derganc, Fick, Haynald, Huter, Keck, Kerner, Marchesetti, Mulley, Palla, Pichler, Pernhoffer, Rigo, Sarntheim, Schafferer, Schönach, Stohl, Strobl, Wagner (Fig. 27), Wettstein, Wolff, Zimmerer.

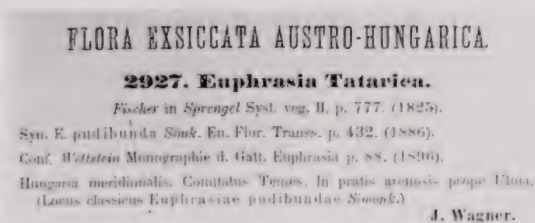


Fig. 27. Herbarium label, Flora Exsiccata Austro-Hungarica (14 × 6.5 cm).

## HUNGARY

*Lajos Richter* (fl. 1880-1900)

The only existing letter from Lajos Richter to Cheeseman announced the dispatch of over 500 specimens from Budapest via London in July 1884. Prior to this there must have been some sort of correspondence between them as Richter knew the name of Cheeseman's London agents and also wrote that he was hoping for "new sendings" from Auckland. As seen in his letter (Fig. 28), his quaint use of English is amusing. His distinctive hand-writing can be seen on the many "Flora Hungarica" labels, "Ex herb. Richter", in the Cheeseman Herbarium (Fig. 29).



RICHTER LAJOS  
 Budapest Maria Valeria utca  
 Thonet udvar.

Bpest 16/7 88.

Dear Sir,

I have sendet to day on the adrees  
 Messrs W. K. Graham et Comp  
 London E. C. 23 Great  
 St Helens

by post part payd a parcel  
 with 541 specimens for you  
 dear Sir, and I hope they will  
 sweet you.

In return I shall be everyday  
 happy to receive new sen-  
 dings from you.

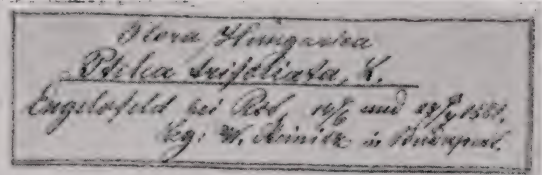
Your very truly  
 Richter Lajos

Fig. 28. Letter from L. Richter, 16 July 1887.

Richter Lajos, as he signed himself, was a clerk in Budapest (Clokie 1964) and gave his address as Marie Valerie Street (Fig. 29). His large "Ex herb. Richter" labels were often printed in purple ink. Many smaller purple-inked labels (Fig. 30) on material in the Cheeseman Herbarium, collected by W. Steinitz of Hungary, were probably Ex Herb. Richter also. Most of the exchange specimens from Budapest were collected by Richter himself (see "leg ipse" Fig. 29), but occasionally other collectors names are seen on the large labels, e.g. Ebenhoch, Lang and Pontarlier.



29



30

Figs. 29, 30. Herbarium labels. 29. Label ex herb. Richter, 18 September 1875 (15 × 12 cm). 30. Flora Hungarica label — collector W. Steinitz, 27 July 1881 (10 × 3.5 cm).

#### GERMANY

##### Friedrich Ludwig Emil Diels (1874-1945)

Dr Diels of Berlin Botanisches Museum wrote to Mr Cheeseman in January 1895 requesting specimens of New Zealand alpine plants, adding, "The Berlin Royal Herbarium stands ready to recompense you by a like favour." (Fig. 31). A mutual exchange of plants would presumably be the outcome of this statement, but no trace has been found in the Auckland Institute and Museum Herbarium of any specimens sent from Berlin about 1900. The requested alpine material was sent from Auckland in June 1895 and acknowledged by Diels in a postcard dated 28 August 1895. Later correspondence from Diels revealed that several more requests were met, including New Zealand specimens for Professor Engler. Dr Diels also visited Cheeseman in Auckland in 1902.

A paper by Diels, "Vegetations-biologie von Neu-Seeland" (Diels 1896) was given faint praise by Cheeseman, who wrote (Cheeseman 1925, pp. xxxiii-iv) that the paper:

"deserves special mention on account of being the first attempt to prepare an account of the flora of the colony from an oecological standpoint. Although based entirely on herbarium material and on the observations of other botanists and collectors, and consequently containing errors both of omission and commission, it is nevertheless a work of considerable originality and merit, and is well worth the attention of all students of the flora."



BERLIN, DEN 26. I. 1895.

~~W. GRÜNEWALD STR.~~  
 Botanisches Museum  
 W. Grunewald Str.

Dear Sir

I am engaged with a little study of the New Zealand alpine vegetation. I take the liberty of inquiring, if it would be possible for you to send me your alpine plants enumerated in the following list, which are not represented in the Berlin Royal Herbarium. One specimen of each species will me sufficient.

The Berlin Royal Herbarium stands ready to recompense you by a like favor. Withall you will receive the "Index seminum horti Berolinensis" 1895.

Awaiting your reply I remain your obedient servant

L. Diels

Berlin W

Botanisches Museum

Grunewald, Strasse 6/7

Museum Auckland  
New Zealand  
July 9. 1900

My dear Sir - I have two letters of yours before me, one dated October 24 1899, received many months ago, the other of March 8, to hand only a few days back. I owe you many apologies for my delay in answering the first - a delay which was mainly occasioned by my time being so much taken up by special engagements that I was unable to sort from my herbarium the specimens you asked for.

For many years past I have paid special attention to both Carex and Uncinia, and I think I can say that I have the most complete collection of the New Zealand forms in existence. A good many years ago I prepared a

Fig. 32. Portion of letter from T. F. Cheeseman to G. Kükenthal, 9 July 1900.



Grat auf F. bei Tobag, dem  
13. October 1900.

Hochgeachteter Herr!

Länger, als Sie und ich voraussetzten, hat die  
Fahrt Ihrer Pflanzen bis zu mir gedauert,  
aber nun sind sie endlich glücklich in meinen  
Gärten, und ich habe sie in diesen 2 Tagen wohl  
10mal betrachtet mit heller Freude daran.  
Es sind ganz prächtige Sachen und so voll-  
ständig! Nehmen Sie meinen herzlichsten und  
aufrichtigsten Dank! Ich habe sofort nach Berlin  
geschrieben, um mir die noch fehlenden Kötizen  
aus dem Frans. Herbar. Inst. zu verschaffen  
und werde dann sofort mit der Bearbeitung  
des Materials beginnen, zu welchem mir noch  
eine Ergänzung aus dem Herbar von Herrn  
Lorlagne vorliegt.

Fig. 33. Portion of letter from G. Kükenthal, 13 October 1900.

*Georg Kükenthal* (1864-1955)

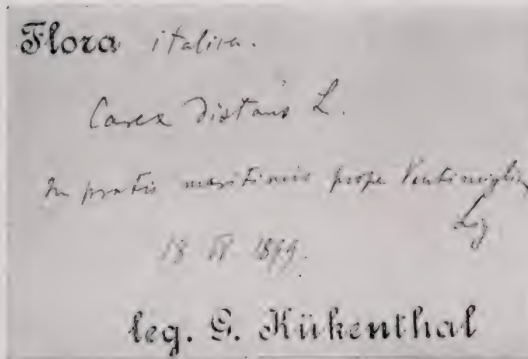
Dr Kükenthal, in preparation for his *Carex* monograph in Engler's *Das Pflanzenreich* (Kükenthal 1909, pp. 67-824), wrote to Cheeseman from Coburg, Germany, in 1899. He sought duplicate specimens from New Zealand of both *Carex* and *Uncinia* and in return offered *Carex* from Europe and America. The following year Cheeseman despatched "sets of 115 varieties" to Kükenthal via Kew, explaining, "As it is somewhat difficult to send a parcel direct from New Zealand to Cobourg (it is too large to go by post), I have included it in a box which I am sending to the Royal Gardens at Kew; thinking that you can easily make arrangements for getting it from there." (Cheeseman to Kükenthal, 9 July 1900) (Fig. 32). A translation of Kükenthal's reply, found with the original letter (in German) (Fig. 33), to Cheeseman dated 13 October, 1900, reads:

"The transit of your plants took much more time than you and I supposed, but at last they are safely in my hands, and these two last days I has nearly ten times looked at them with greatest pleasure. They are beautiful things, and so complete! Kindly accept my sincerest thanks!"

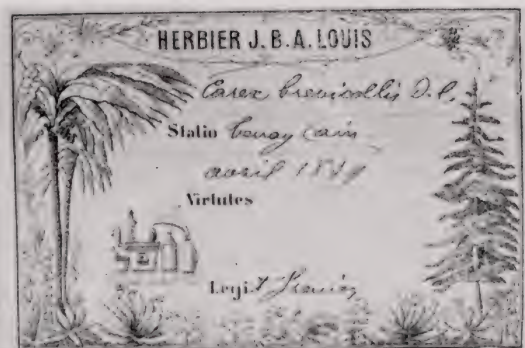
In January 1901 Kükenthal forwarded a collection of Carices to Cheeseman (Fig. 34). As well as European collections made by Kükenthal there are, in the AK Herbarium, *Carex* specimens from collectors in Japan, Himalaya and Singapore all ex Kükenthal Herbarium.

*Other European collectors*

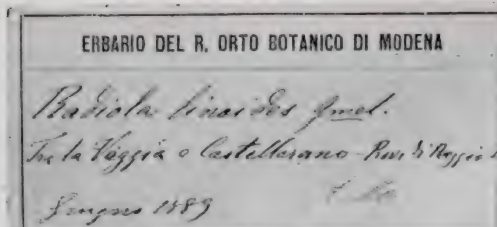
European specimens in the Cheeseman Herbarium from collectors cited below are not labelled ex Müller, ex Levier, Flora Exsiccata Austro-Hungarica, ex Richter or ex Kükenthal, though it is possible that some came from these sources.



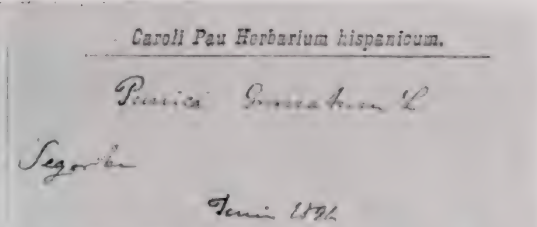
34



35



36



37

Figs. 34-37. Herbarium labels. 34. Label from G. Kükenthal, 18 April 1899 (11 × 8.5 cm). 35. Label ex Herbar J. B. A. Louis, April 1879 (12 × 8.2 cm). 36. Label from A. Mori, 1899 (13 × 7 cm). 37. Label from C. Pau, 1896 (16 × 7 cm).



A. Ausserdorfer, Dr Behrendsen, W. Bernouilli, F. C. E. Börgesen, H. Bourdot, F. Bruyas, H. Carling, P. Chavin, E. Chiovenda, E. Cornaz, F. Cortesi, E. Crespigny, R. Enwald & C. A. Knabe, J. P. Fray, E. Th. & H. Fries, G. Göthlin, W. Granberg, H. Gysperger, E. & A. Haglund, J. Hartz, P. A. Jonson, A. Kaiser, S. Källström, L. Keller, I. Lagercrantz, R. Larsson, J. Lilliesköld, S. O. Lindberg, E. L. Ljungström, J. Lloyd, M. Longa, F. Lönnkvist, M. Lorenzen, J. B. A. Louis (Fig. 35), J. E. Lundequist, O. Möller, A. Mori (Fig. 36), A. E. E. Mouillefarine, C. J. Neuman, E. Nordström, C. Pau (Fig. 37), K. G. Sanio, G. V. Schotte, H. G. Simmons, C. Stenholm, H. Sudre, P. Tillet, G. Treffer, A. Vaccari, G. Vidal, Dr Voeltzkow, L. J. Wahlstedt, E. Warodell, C. G. Westerlund.

### Conclusion

Cheeseman collected many duplicates in his long career as a botanist and distributed these freely. In some cases he did not even retain a voucher. Therefore, although the majority of his collections are represented in the Auckland Institute and Museum Herbarium, some will only be found in overseas herbaria. Lanjouw & Stafleu (1954, p. 124) listed Cheeseman collections as being in the following European institutions:

Botanisches Museum, Berlin; Royal Botanic Garden, Edinburgh; Universitatis Florentinae, Istituto Botanico, Firenze; Conservatoire et Jardin botaniques, Geneve; Royal Botanic Gardens, Kew; Botanisches Institut der Universität, Kiel; Naturhistorisches Museum, Wien.

No attempt has been made here to give a complete list of 20th century collectors represented in the European material acquired as exchange by Cheeseman up to 1900. Rather, a method of selective sampling of many families in the Herbarium has complemented information obtained from the early Cheeseman correspondence in the Auckland Institute and Museum Library's manuscript collection.

*Acknowledgements.* I am most grateful to Mr E. B. Bangerter (formerly of the British Museum Herbarium) for his help in segregating relevant collections while doing voluntary work on the overseas section of the Auckland Institute and Museum Herbarium. His ready information about British botanists is much appreciated.

### REFERENCES

BALFOUR, I. B.

- 1913 A sketch of the professors of Botany in Edinburgh from 1670 until 1887. *Makers of British Botany* ed. Oliver, F. W. University Press, Cambridge. pp. 280-301.

BENNETT, A.

- 1883 Two new Potamogetons. *J. Bot., London* 21: 65-67.

BLUNT, W. and W. T. STEARN

- 1973 *Captain Cook's florilegium*. Lion and Unicorn Press, London. 111 pp.

BROOKER, S. G. and R. C. COOPER

- 1962 *New Zealand medicinal plants*. Handb. Auckland War Memorial Mus. 46 pp.

CHAUDRI, M. N. et al.

- 1972 Index Herbariorum Part 2. Collectors, I-L. *Regnum vegetabile* 86: 297-473.

CHEESEMAN, T. F.

- 1906 *Manual of the New Zealand flora*. 1st ed. Government Printer, Wellington. 1199 pp.  
1914 *Illustrations of the New Zealand flora*. Government Printer, Wellington. 2 vols.  
1925 *Manual of the New Zealand flora*. 2nd ed. Government Printer, Wellington. 1163 pp.

CLOKIE, H. N.

- 1964 *An account of the herbaria of the Department of Botany in the University of Oxford*. Oxford University Press, Oxford. 280 pp.

DANIELS, G. S. and F. A. STAFLEU

- 1974 HI-IAPT portraits of botanists. *Taxon* 23: 540.

DIELS, L.

- 1896 Vegetations-Biologie von Neu-Seeland. *Engl. Bot. Jb.* 22: 202-300.

GOULDING, Jeanne H.

- 1974 Notes on the Cheeseman Herbarium Part 1. Exchange with U.S.A. herbaria before 1900. *Rec. Auckland Inst. Mus.* 11: 105-117.

HEDGE, I. C. and J. M. LAMOND

- 1970 *Index of collectors in the Edinburgh Herbarium*. Her Majesty's Stationery Office, Edinburgh. 147 pp.

HOOKE, J. D.

- 1852-1855 *Flora Novae-Zelandiae*. London, 2 vols.

KUKENTHAL, G.

- 1909 Cyperaceae - Caricoideae. *Das Pflanzenreich* 38: 1-824.

LANJOUW, J. and F. A. STAFLEU

- 1954 Index Herbariorum Part 2. Collectors A-D. *Regnum vegetabile* 2: 1-174.

LASEGUE, A.

- 1845 *Musée Botanique de M. Benjamin Delessert*. Fortin, Masson, Paris. 588 pp.

MURRAY, G.

- 1904 The department of botany. *The history of the collections contained in the natural history departments of the British Museum* 1: 79-193.

SALMON, C. E.

- 1929 Arthur Bennett. *J. Bot., London* 47: 217-221.

STAFLEU, F. A.

- 1970 Benjamin Delessert and Antoine Lasègue. *Taxon* 19: 920-936.

TUTIN, T. G. et al.

- 1964 *Flora Europaea* Vol. 1. University Press, Cambridge. 464 pp.